

434819

A Preliminary Assessment
of
Chevron U.S.A./Baltimore Terminal
Baltimore, Maryland

Final Report
June 1985

**ORIGINAL
(Red)**

Prepared By: Maryland Waste Management Administration
201 West Preston Street
Baltimore, Maryland 21201

Prepared For: U.S. Environmental Protection Agency
Region III
841 Chestnut Building
Philadelphia, Pennsylvania 19107

Chevron U.S.A./Baltimore Terminal
Baltimore, Maryland

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Summary and Recommendations

The Chevron U.S.A./Baltimore Refinery consists of a seventy-five and one-half acre industrial complex in the extreme southeastern tip of Baltimore City. The site covers an elongated strip from as far west as the Fairfield and Chesapeake Avenue junction to the Patapsco River shoreline on the east. The plant employs thirty-one (31) permanent and six (6) seasonal employees and operates principally as an asphalt terminal.

Originally owned by CONOCO, American Bitumuls and Asphalt Company bought the portion of land, which Chevron U.S.A. now occupies, in 1948. Around 1957, the company adopted its current name: Chevron U.S.A./Baltimore Terminal. The site's original plans included asphalt production, chemical and transport divisions, research and development, and all other facets of operations under the Chevron name, the facility was limited to the Terminal mode on July 4, 1983 and has been maintained under Terminal status ever since. According to plant officials, Chevron has no plans for incorporating any of their other operations at this location at present.

The current scope of Terminal operations at the Baltimore plant include the production of approximately 2×10^6 barrels of asphalt, an additional 350,000 barrels of asphalt emulsion, and will convert to approximately 300,000 barrels of asphalt to cut-back asphalt over the course of a typical year.

The facility holds slightly over 2×10^6 barrels of storage capability in the sixty (60) active storage tanks on-site. Barge shipments from the process plant in Perth-Amboy, New Jersey will utilize this site as a storage depot. The asphalt is received off the barge at between 250° and 275° Fahrenheit (F) and may be shipped from the Baltimore Terminal in three (3) ways:

- a.) Paving grade asphalt may be oil-heated and then shipped off-site by tanker truck at between 300° to 350°F. Asphalt elevated to this temperature range is shipped exclusively by truck.

- b.) Approximately 70,000 barrels of cut-back asphalt per year is shipped by barge to the Richmond, Virginia depot at the reduced temperature of 150°-170°F. For safety and product integrity reasons, all cut-back asphalt, which is simply asphalt with solvent added at a 75% to 25% ratio, is shipped at this temperature range.
- c.) The third and final function of the Chevron U.S.A./Baltimore Terminal is to produce asphalt emulsions. This process utilizes chemically treated water to produce the asphalt emulsions and may be shipped at between 80° and 160°, but only by tanker truck. Production levels of emulsions generally approximate the cut-back asphalt output, but these amounts will fluctuate considerably depending on supply and demand.

Asphalt emulsions are produced into two basic grades:

- a.) Anionic emulsions which are made from asphalt, a caustic solution, water, and an emulsifier and,
- b.) Cationic emulsions which are made from asphalt, an acid solution, water, and an emulsifier.

The Chevron U.S.A./Baltimore Terminal handles the heating and reheating needs of the in-transit asphalt through a sophisticated above ground piping system. Two hot oil, heat transfer boilers rated at 55,000 lbs. hour at 175 lbs. pressure produce enough steam to elevate the temperature of the asphalt for shipping and transfer requirements of all types except paving grade asphalt. Paving grade asphalt, because of its exceptional thermal requirement (300°-350°), must be heated by heat exchangers on-site which utilize oil to accomplish this task.

Waste oils which are created by the asphalt processing and thermal treatment conducted at the Terminal are handled, at least in part, by a multi-stage API separator on-site (see photographs). The separator tanks incorporate a series of integrated tanks which remove the oils from the surfaces of the water contained in each unit by the use of skimmers. The design allows the waste oils to be gradually reduced as the tanks cascade toward the rear of the system. In the final stage, the residual wastes are filtered through

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an Air Filtration Deparator System which returns the decontaminated water to an in-ground collection pit.

In addition, the Chevron U.S.A. facility also utilizes an observation pond located near the east end of the compound, just inland from the REXCO area (Chevron Asphalt Pier). The observation pond has a capacity of 286,000 gallons and covers an area of approximately one hundred feet by thirty feet (see enclosed site plan).

On the afternoon of May 7, 1985, field personnel from MD WMA visited the facilities of the Chevron U.S.A./Baltimore Terminal for the purpose of conducting this preliminary assessment. This particular site was originally listed on the Maryland Superfund Program's List of Potential Hazardous Waste Sites because of the previously accepted practice of weathering and burying leaded tank bottoms at petroleum operations and terminals of this type.

During an interview with the Terminal Superintendent, MD WMA learned that there were, in fact, two leaded tank bottoms on the property on either side of the small paved roadway just south of the District Office Building (See the upper-left-hand quadrant of the enclosed site plan).

Investigation as to the disposition of the two leaded tank bottoms proved fruitless, however. Apparently, the tank bottoms were on the property when Chevron U.S.A. originally purchased the Terminal property from the American Bitumuls and Asphalt Company. According to plant personnel, the tank bottoms were installed some time prior to 1948 in the location previously described. No one at the Baltimore Terminal had any knowledge or recollection of the manner in which the tank bottoms were ultimately abandoned or when the units were buried or removed. The Terminal Superintendent, an employee at this plant for thirty-seven years, could not recall whether the tank bottoms were removed from the grounds or buried in place. The only information available regarding the location where the tank bottoms existed are the comments and descriptions by the Chevron personnel interviewed which gave indications that the grounds in and around the original location of the leaded tank bottoms have been excavated and regraded (See enclosed photographs, pages 9 and 10). No physical evidence of the tank bottoms on-site remains.

The overall appearance of the Chevron U.S.A./Baltimore Terminal is satisfactory. However, during the course of inspecting the facility, MD WMA personnel discovered the remnants of an acid leak which, according to the Terminal Superintendent, had occurred during the night shift that same morning. Repairs had been completed and the total extent of the incident developed when the gate valve atop the crossing length of pipe dripped onto the concrete floor in the Control Room. Absorbent material had been placed on the dripping acid and the waste was packed into a fifty-five gallon drum to be manifested and properly disposed of off-site. No residual material from the spill was remaining on the floors, walls, or pipes.

Throughout the remainder of the inspection, the MD WMA personnel found no evidence of any problems. A few of the storage tanks near the boilers and shop areas had some dried asphalt drippings on their side walls, but in general, the plant is maintained in a very clean and orderly manner. Even the truck loading area was observed to be well maintained (See page 30).

In an attempt to better assess the site's historical track record, MD WMA researched the permit files and interviewed staff from both the Industrial Waste and Enforcement Divisions. On all counts, Chevron U.S.A./Baltimore Terminal was given a good report. No violations or incidents have been noted since prior to December of 1982. The site's eleven monitoring wells show no reportable levels of any contaminants.

Raw materials are chiefly stored in fifty-five (55) gallon drums in the facility's designated drum storage area near the Terminal warehouse and this area is equally well kept.

The observation pond near the Chevron Asphalt Pier is supported by a twin section spillway and observation well (See photographs, page 39). This impoundment is approximately one hundred feet in length by thirty feet in width and is routinely dredged of its accumulated solids approximately once per year. These materials seldom exceed one hundred pounds per dredging and consist of dust particles and wind blown sand granules common to the area.

Although information concerning the peninsula on which the Chevron plant is based indicates that many years ago the whole vicinity in and around

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the Terminal property was constructed of artificial fill, no specifications about the exact nature of the materials used in filling this area were kept. Based on the physical appearance and generally orderly fashion in which this site is being maintained, there is no evidence of any persistent environmental problems. However, because of the lack of concrete evidence that the old leaded tank bottoms were removed, a low-priority site investigation is recommended.

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POTENTIAL HAZARDOUS WASTE SITE PRELIMINARY ASSESSMENT PART 1 - SITE INFORMATION AND ASSESSMENT		I. IDENTIFICATION 01 STATE: _____ 02 SITE NUMBER: _____	
II. SITE NAME AND LOCATION			
01 SITE NAME (Legal, common, or descriptive name of site) Chevron U.S.A./Baltimore Terminal		02 STREET, ROUTE NO., OR PLACE, LOCATION IDENTIFIER 1955 Chesapeake Avenue	
03 CITY Baltimore	04 STATE Md.	05 ZIP CODE 21226	06 COUNTY _____
07 COORDINATE LATITUDE 76° 34' 30"	08 LONGITUDE 39° 14' 00"	09 LOCATION IDENTIFIER Baltimore City (Curtis Bay Area)	
10 DIRECTION TO SITE (Start from major road or landmark) Take I-95 to I-895 (Baltimore Harbor Tunnel Thruway). Take Exit 11 and turn left onto Shell Road. Make a left turn onto Chesapeake Avenue to entrance gate. Chevron U.S.A. office is on the right-hand side of the street.			
III. RESPONSIBLE PARTIES			
01 OWNER (Name) Chevron U.S.A., Incorporated		02 STREET ADDRESS (Name) 575 Market Street	
03 CITY San Francisco	04 STATE Ca.	05 ZIP CODE 94120	06 TELEPHONE NUMBER (415) 894-5043
07 OPERATOR (Name) _____		08 STREET ADDRESS (Name) or: (201) 738-2000 Mr. D.H. Beck	
09 CITY _____	10 STATE _____	11 ZIP CODE _____	12 TELEPHONE NUMBER () _____
13 TYPE OF OWNERSHIP (Check one) <input checked="" type="checkbox"/> A. PRIVATE <input type="checkbox"/> B. FEDERAL <input type="checkbox"/> C. STATE <input type="checkbox"/> D. COUNTY <input type="checkbox"/> E. MUNICIPAL <input type="checkbox"/> F. OTHER: _____ <input type="checkbox"/> G. UNKNOWN			
14 OWNER/OPERATOR NOTIFICATION ON FILE (Check one) <input type="checkbox"/> A. RCRA 3001 DATE RECEIVED: ____/____/____ <input type="checkbox"/> B. UNCONTROLLED WASTE SITE OF COURSE DATE RECEIVED: ____/____/____ <input type="checkbox"/> C. NONE			
IV. CHARACTERIZATION OF POTENTIAL HAZARD			
01 ON SITE INSPECTION <input checked="" type="checkbox"/> YES DATE 05/07/85 BY (check all that apply): <input type="checkbox"/> NO <input type="checkbox"/> A. EPA <input type="checkbox"/> B. EPA CONTRACTOR <input checked="" type="checkbox"/> C. STATE <input type="checkbox"/> D. OTHER CONTRACTOR <input type="checkbox"/> E. LOCAL HEALTH OFFICIAL <input type="checkbox"/> F. OTHER: _____ (Specify) CONTRACTOR NAME(S): _____			
02 SITE STATUS (Check one) <input type="checkbox"/> A. ACTIVE <input checked="" type="checkbox"/> B. INACTIVE <input type="checkbox"/> C. UNKNOWN		03 YEARS OF OPERATION 1948 Present <input type="checkbox"/> UNKNOWN	
04 DESCRIPTION OF SUBSTANCES PRESENT, KNOWN, OR ALLEGED 2 separate leaded tank bottoms were located on the facility grounds at the time that Chevron took over operations in 1948. The tank bottoms were located on either side of the paved roadway south of the main office, one below tank number 23 and the other below tank 34 (see photographs)			
05 DESCRIPTION OF POTENTIAL HAZARD TO ENVIRONMENT AND/OR POPULATION Due to the time which has elapsed since the leaded tank bottoms were abandoned, very little information is available regarding the disposition and/or condition of the surrounding groundwater. Please see Summary and Recommendations.			
V. PRIORITY ASSESSMENT			
01 PRIORITY FOR INSPECTION (Check one. If high or medium is checked, complete Part 2 - Waste Information and Part 3 - Description of Release, Conditions and Incidents) <input type="checkbox"/> A. HIGH (Inspection required promptly) <input type="checkbox"/> B. MEDIUM (Inspection required) <input checked="" type="checkbox"/> C. LOW (Inspection on time available basis) <input type="checkbox"/> D. NONE (No further action needed, complete current disposition form)			
VI. INFORMATION AVAILABLE FROM			
01 CONTACT Mr. William E. Rogers		02 OF (Agency, Organization) Chevron U.S.A./Baltimore Terminal	
03 PERSON RESPONSIBLE FOR ASSIGNMENT John H. Kershner, R.S.		04 TELEPHONE NUMBER (301) 576-3795	
05 OFFICE MD DHMH		06 DATE 06/09/85	

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POTENTIAL HAZARDOUS WASTE SITE
PRELIMINARY ASSESSMENT

PART 3 - DESCRIPTION OF HAZARDOUS CONDITIONS AND INCIDENTS

I. IDENTIFICATION

01 STATE 02 SITE NUMBER

II. HAZARDOUS CONDITIONS AND INCIDENTS

01 ☐ A. GROUNDWATER CONTAMINATION

03 POPULATION POTENTIALLY AFFECTED: 3-5,000

02 ☐ OBSERVED (DATE: _____)

☒ POTENTIAL

☐ ALLEGED

04 NARRATIVE DESCRIPTION

The previously accepted process of weathering leached tank bottoms on-site may have contributed to the underlying soils and generated a groundwater contamination problem. In addition, the plant operated as a refinery before July of 1983 and the processes associated with these operations may have caused contamination of the groundwater.

01 ☐ B. SURFACE WATER CONTAMINATION

03 POPULATION POTENTIALLY AFFECTED: _____

02 ☐ OBSERVED (DATE: _____)

☐ POTENTIAL

☐ ALLEGED

04 NARRATIVE DESCRIPTION

01 ☐ C. CONTAMINATION OF AIR

N/A

03 POPULATION POTENTIALLY AFFECTED: _____

02 ☐ OBSERVED (DATE: _____)

☐ POTENTIAL

☐ ALLEGED

04 NARRATIVE DESCRIPTION

01 ☐ D. FIRE/EXPLOSION/INCIDENT

03 POPULATION POTENTIALLY AFFECTED: 3-5,000

02 ☐ OBSERVED (DATE: _____)

☐ POTENTIAL

☐ ALLEGED

04 NARRATIVE DESCRIPTION

01 ☐ E. DIRECT CONTACT

03 POPULATION POTENTIALLY AFFECTED: N/A

02 ☐ OBSERVED (DATE: _____)

☐ POTENTIAL

☐ ALLEGED

04 NARRATIVE DESCRIPTION

01 ☒ F. CONTAMINATION OF SOIL

03 AREA POTENTIALLY AFFECTED: 75-100 acres
(Acres)

02 ☐ OBSERVED (DATE: _____)

☒ POTENTIAL

☐ ALLEGED

04 NARRATIVE DESCRIPTION

01 ☒ G. DRINKING WATER CONTAMINATION

03 POPULATION POTENTIALLY AFFECTED: 75-100 acres

02 ☐ OBSERVED (DATE: _____)

☒ POTENTIAL

☐ ALLEGED

04 NARRATIVE DESCRIPTION

01 ☒ H. WORKER EXPOSURE/INJURY

03 WORKERS POTENTIALLY AFFECTED: 37

02 ☐ OBSERVED (DATE: _____)

☒ POTENTIAL

☐ ALLEGED

04 NARRATIVE DESCRIPTION

01 ☒ I. POPULATION EXPOSURE/INJURY

03 POPULATION POTENTIALLY AFFECTED: 3-5,000

02 ☐ OBSERVED (DATE: _____)

☒ POTENTIAL

☐ ALLEGED

04 NARRATIVE DESCRIPTION



POTENTIAL HAZARDOUS WASTE SITE
PRELIMINARY ASSESSMENT

PART 3 - DESCRIPTION OF HAZARDOUS CONDITIONS AND INCIDENTS

I. IDENTIFICATION

01 STATE 02 SITE NUMBER

II. HAZARDOUS CONDITIONS AND INCIDENTS (Continued)

01 ☐ J. DAMAGE TO FLORA
04 NARRATIVE DESCRIPTION

02 ☐ OBSERVED (DATE: _____)

☐ POTENTIAL

☐ ALLEGED

The entire site is virtually devoid of vegetation except for a few, secluded, small grass plots.

01 ☐ K. DAMAGE TO FAUNA

04 NARRATIVE DESCRIPTION (include name(s) of species)

02 ☐ OBSERVED (DATE: _____)

☒ POTENTIAL

☐ ALLEGED

The site rests on the shoreline of the Patapsco River.

01 ☐ L. CONTAMINATION OF FOOD CHAIN

04 NARRATIVE DESCRIPTION

02 ☐ OBSERVED (DATE: _____)

☒ POTENTIAL

☐ ALLEGED

Potential contamination of fish and crustaceans in area waterways is conceivable, but not likely.

01 ☐ M. UNSTABLE CONTAINMENT OF WASTES

(Spills runoff standing liquids, etc.)

03 POPULATION POTENTIALLY AFFECTED: N/A

02 ☐ OBSERVED (DATE: _____)

☐ POTENTIAL

☐ ALLEGED

04 NARRATIVE DESCRIPTION

N/A

01 ☐ N. DAMAGE TO OFF-SITE PROPERTY

04 NARRATIVE DESCRIPTION

02 ☐ OBSERVED (DATE: _____)

☒ POTENTIAL

☐ ALLEGED

The site is surrounded by neighboring industries and residential dwellings.

01 ☐ O. CONTAMINATION OF SEWERS, STORM DRAINS, WWTPS

04 NARRATIVE DESCRIPTION

02 ☐ OBSERVED (DATE: _____)

☒ POTENTIAL

☐ ALLEGED

No observed contamination or apparent problems.

01 ☐ P. ILLEGAL/UNAUTHORIZED DUMPING

04 NARRATIVE DESCRIPTION

02 ☐ OBSERVED (DATE: _____)

☐ POTENTIAL

☐ ALLEGED

N/A

None observed.

05 DESCRIPTION OF ANY OTHER KNOWN, POTENTIAL, OR ALLEGED HAZARDS

None observed.

III. TOTAL POPULATION POTENTIALLY AFFECTED: _____

IV. COMMENTS

No significant problems were observed.

V. SOURCES OF INFORMATION (List source(s) of information, e.g., state files, company analysis, etc.)

1. Mr. William E. Rogers, Terminal Superintendent
2. Mr. Donald H. Beck, Perth Amboy Regional Office
3. MD DHMH files and records
4. Interviews with MD WMA field and permit personnel

FIELD TRIP SUMMARY REPORT

Name of Site Chevron U.S.A./Baltimore Terminal (MD-143)

Address/Site Location 1955 Chesapeake Avenue

Baltimore, Maryland 21226

(Baltimore City)

I. List site contacts and accompanying inspectors; include name, title, affiliation and respective phone numbers.

Mr. John H. Kershner, Sanitarian, MD DHMH/WMA, (301) 659-2950

Mr. William E. Rogers, Terminal Superintendent, (301) 576-3795

Mr. Donald H. Beck, Environmental Specialist, Chevron Regional Office (301) 738-200

II. Site observations: (Include Site Map)

A. Population within 1,000 feet of the site (check one).

☐ 0 - 10

☐ 10 - 100

☐ 101 - 1000

☒ XXX 1001 - 3000

☐ 3001 - 10,000

☐ > 10,000 (specify)

B. List surrounding land use. Be descriptive telling the approximate distance away from the site and the actual usage of the land areas.

North: Chesapeake Avenue, Residential -- Adjacent

South: Continental Oil Company -- Adjacent

East: Patapsco River and Shipping Dock -- Adjacent to Pier

West: Fairfield Road, Residential -- Adjacent

C. Water supply for area. Well data available through central computer if map coordinates are given.

1. Surface intakes (locate on attached map)

2. Municipal wells (locate on attached map)

3. Domestic wells: How many are located within 1/4 mile of the site? Were odor problems or taste problems reported by well users of local supplies? If so, please elaborate and give specific details of problems.

Please refer to the enclosed computer print-out of area wells within a radius of approximately one mile of the site.

D. Are surface or subsurface (leachate) draining areas from the site apparent? Yes _____ No X If yes, please elaborate and give specific details.

E. Are streams or receiving waters adjacent to the site? Yes X No _____ If yes, list observations concerning benthic community, plant density, color, flow-rate, situation, etc:

The Patapsco River is a major waterway for shipping lanes to and from the Baltimore Harbor. The waters of the Patapsco River are fed by the adjacent Northwest Harbor, Middle Branch, and Curtis Bay. Benthic families include crustaceans, fish, and insects.

F. Is the site located in the flood plain? Yes X No _____ If yes, please elaborate and give details.

The Chevron facilities rest on the west shore of the Patapsco River north of Wagners Point.

FIELD TRIP SUMMARY REPORT

- 3 -

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G. Site topography: Provide a detailed description. The entire facility is located on the flat coastal plain adjacent to the Patapsco River.

H. Provide a description of the vegetation and flora on and around the site:

Light woodlands to the west and northwest of the property. The entire property is devoid of vegetation except for a few grass plots.

I. Other observations: (i.e. erosion, disturbed soils, evidence of spills, charred areas, other unusual observations)

One minor acid leak was observed in the Control Room in the emulsifying area (See Photos). The workmen had contained the material and nearly completed clean-up of the acid when I arrived. No evidence of leaking or dripping onto the ground was observed.

III. Provide a complete description and sketch map which identifies all problem areas discovered on the site: (i.e. lagoons, leachate seeps, drum storage areas, open dumping, open burning, monitoring well locations, etc.).

Refer to enclosed sketch map and Blueprint Site Plan.

IV. Were photographs taken? Yes x No If yes, who has custody of them?

Name: John H. Kershner, Sanitarian

Agency: Maryland Department of Health and Mental Hygiene/OEP/WMA

Phone No: (301) 659-2950

V. Name of Inspector: John H. Kershner, Sanitarian

Agency: MD DHMH/Office of Environmental Programs/Waste Management Admin.

Phone No: (301) 659-2950

Date On-site: May 7, 1985

Weather Conditions: Sunny, clear, light winds, temperatures in

upper 60's to low 70's.

PERFORMANCE OF A PRELIMINARY ASSESSMENT1. Background Information Reviewa. Hydrology

1. Fault Zone N/A
2. Karst Zone N/A
3. 100 Yr Flood Plain Yes, the site rests on the west shore of the Patapsco River
4. Regulated Floodway Patapsco River, Curtis Bay
5. Wetland N/A
6. Recharge Zone Local area and tidal influence of area waterways
7. Soil Characteristics Basically consisting of Quaternary Talbot Formation with silt-clay facies typically buff-orange in color. The consistency includes poorly sorted, poorly bedded quartz silts with Kaolinite, illite, and montmorillonite clays.
8. Direction of GW/SW Flow generally eastward and southeastward.
9. Depth to Ground Water 12-50 feet: See enclosed computer print-out.
10. Use of GW Test wells only
11. Aquifer Yield See enclosed well data computer print-out.
12. Distance to GW/SW Use 400-2000 feet to area wells: See enclosed computer print-out.
13. Recharge/Discharge Area Storms and coastal floodplain
14. Site Slope Site is on flat coastal plain with a very gradual slope.
15. SW Intakes The entire area is on municipal water system.

b. Flora/Fauna

1. Endangered Species See Summary and Recommendations
2. Indicator Species See Summary and Recommendations
3. Critical Habitat See Summary and Recommendations

c. Site History

1. State/Local Chronology of Events N/A

2. Permits

- a. NPDES State: 81-DP-0043; Federal # MD000149
EPA Generator # MDD990686156
 - b. SPCC Plan Yes — Oil Spill Contingency Plan
 - c. State Permits 81-DP-0043
 - d. Air Permits 24-0072-7-0727; 24-0072-4-0917; 24-0072-40918
3. Legal Action N/A

4. Sampling Results No samples were taken.

d. Known or Alleged Hazards

1. Illness Clusters N/A
2. Cancer Studies N/A
3. Health Dept. Records N/A

4. Fish Kills none on record5. Worker/Non-Worker Injury N/A2. Administrative Informationa. Facility Name Chevron U.S.A./Baltimore Terminalb. Address 1955 Chesapeake Avenue, Baltimore, Maryland 21226c. Latitude 76 ° 34 " 30 ' Longitude 39 ° 14 " 00 '

d. Responsible Party

1. Owner Chevron U.S.A., Inc., 575 Market St., San Francisco2. Realty Company N/A3. Generators N/A

e. Type of Operation

1. Generator MDD990686156 (E.P.A. Generator Number)a. Waste Type/Source/Amount Unclassified, non-hazardous wastes of an estimated 40 cubic yards per year are sent to Norris Farm Landfill by truck for disposal.b. Waste Disposition Wastes consist of 10%-20% concentration of asphalt mixed with earth(40 cubic yards/year).2. Storage Raw materials and production materials onlyNo wastes are generated which have hazardous constituents.

3. Treatment/Disposal

a. Incineration N/Ab. Landfill non-hazardous, unclassified wastes taken to Norris Farmc. Landfarm N/Ad. Biological Treatment N/Ae. Chemical Treatment N/Af. Deep Well Injection N/Ag. Surface Impoundment N/Ah. Other N/A

f. Site Activity Status

1. Active _____
2. Inactive XX _____

g. Personnel Present During Inspection

1. Name John H. Kershner / Mr. William E. Rogers _____
2. Address MD DHMH/OEP/WMA Chevron U.S.A.
201 W. Preston St. 1955 Chesapeake Ave. _____
3. Work Phone (301) 659-2950 (301) 576-3795 _____
4. Title Registered Sanitarian Terminal
Superintendent _____

h. Inspection Information

1. Access
 - a. Warrant _____
 - b. Permission Granted by Terminal Superintendent _____
2. Photographs
 - a. Permitted XX _____
 - b. Prohibited _____
 - c. Other _____

3. Field Evaluation

a. Evidence of Contamination

1. Soil N/A _____
2. Runoff N/A _____
3. Spills See Summary and Recommendations and Enclosed Photos _____
4. Air Emissions N/A _____
5. Erosion N/A _____
6. Ponding N/A _____
7. Charred Areas N/A _____

b. Maintenance, operation of run-off collection and control systems

N/A

c. Demographics (Refer to Field Trip Summary Report, Section IV.,

Site Observations)

2. Landfill

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- a. Evidence of Site Instability, Erosion, Improper Drainage

N/A

- b. Evidence of Improper Disposal of Wastes

N/A

- c. Records of Burial Cells, Waste Contents and Volume

N/A

- d. Surface Water Diversion Structures

N/A

- e. Leachate Collection System Type, Lab Analysis, Maintenance

N/A

- f. GW Monitoring Well Details
- The facility has eleven (11) separate monitoring wells and has a State NEDES permit (81-DF-0043)

- g. Gas Venting, Monitoring

N/A

- h. Adequate Closure of Inactive Portion of Facility

N/A

- i. Backcover and Codisposal Practice N/A

- j. Odors Typical observed levels of asphalt process of this kind.
No unusual or excessive odors observed.

- k. Citizen Complaints None on record

- l. Pretreatment of Wastes (Volume Reduction, Chemical Fixation Blending,
Detoxification) See Summary and Recommendations and enclosed photographs.

3. Landfarm N/A

- a. Cell Number, Dimensions _____

- b. Depth of Soil/Waste Material _____

- c. Leachate Collection _____

- d. Waste Application Rate _____
- e. Type of Waste Applied _____
- f. Discing Frequency _____
- g. Reuse Period _____
- h. Runoff Disposal/Treatment _____

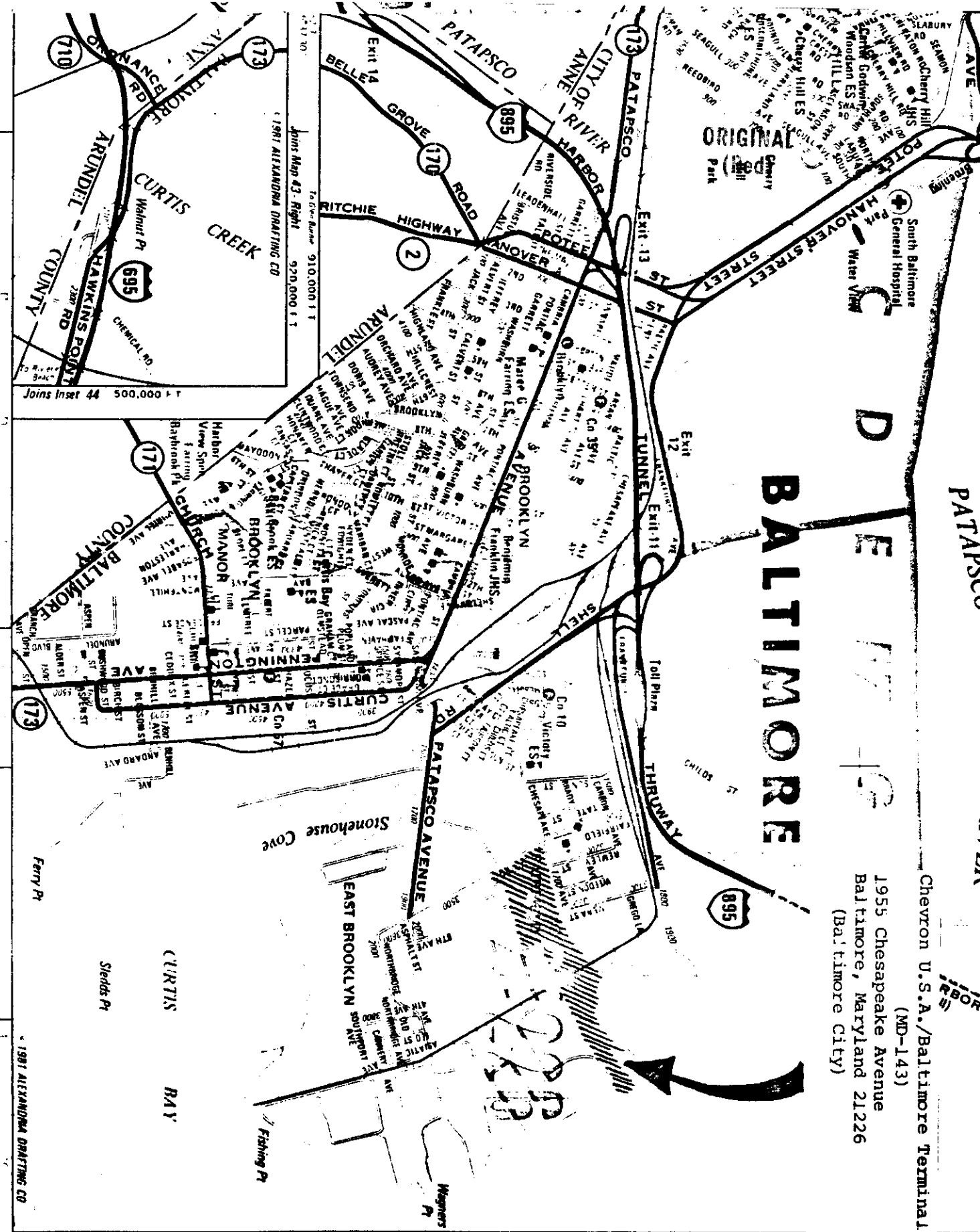
- i. Runoff Diversion Structure Maintenance _____

4. Surface Impoundments

- a. Stability/Condition of Embankments The observation pond on-site is
well maintained with good water clarity observed.
- b. Waste Types _____
- c. Freeboard approximately 14 inches
- d. Liner System Details 30 ml thick plastic liner
- e. Soil Type Used in Construction _____
- f. Monitoring Wells Eleven separate monitoring wells dispersed throughout
the facility limits
- g. Impoundment Dimensions 286,000 gallon capacity
- h. Solids Deposition Algae and settling dust from the air which accumulates
at a rate of about 150 lbs/year
- i. Aerobic/Anerobic Aerobic algae
- j. Disposition of Effluent/Sludge N/A
- k. Access Control The entire facility is enclosed by fence with three stanza
barbed wire across the top.

BALTIMORE

Chevron U.S.A./Baltimore Terminal
(MD-143)
1955 Chesapeake Avenue
Baltimore, Maryland 21226
(Baltimore City)



MD GRID 510,000 FT

Joins Map 44

39°15'00"

Alexandria Drafting Company's "ANNE ARUNDEL COUNTY STREET MAP" For Continuation — Joins Inset 43-Left 39°15'00" MD GRID 920,000 FT — Joins Inset Map 44

1981 ALEXANDRIA DRAFTING CO

COPYRIGHT 1981 ALEXANDRIA DRAFTING COMPANY

Joins Inset 44 500,000 FT

1981 ALEXANDRIA DRAFTING CO

Joins Map 43-Right 920,000 FT

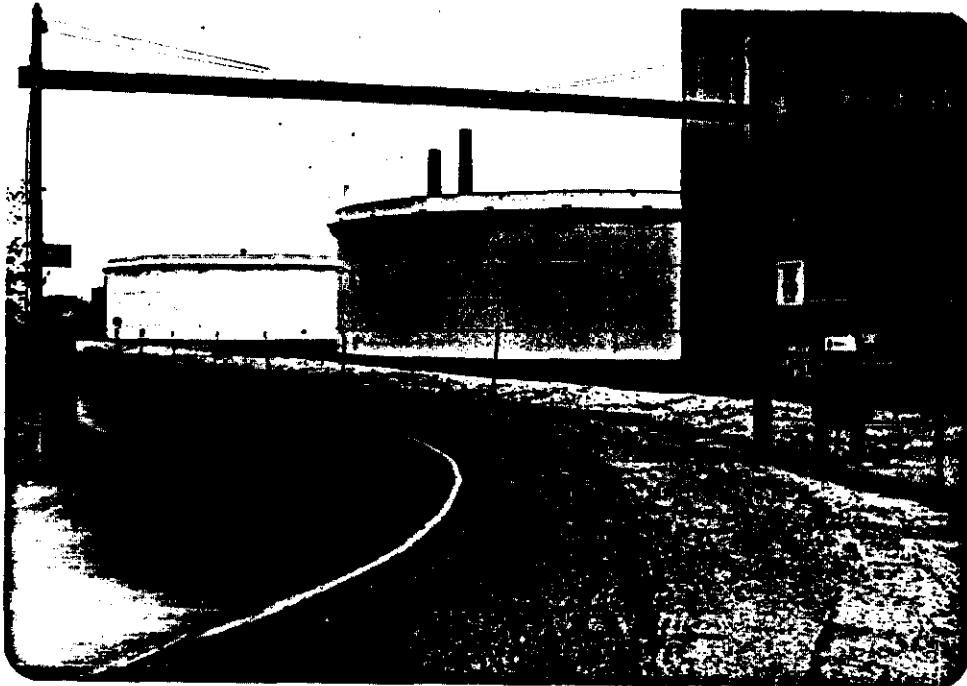
1981 ALEXANDRIA DRAFTING CO



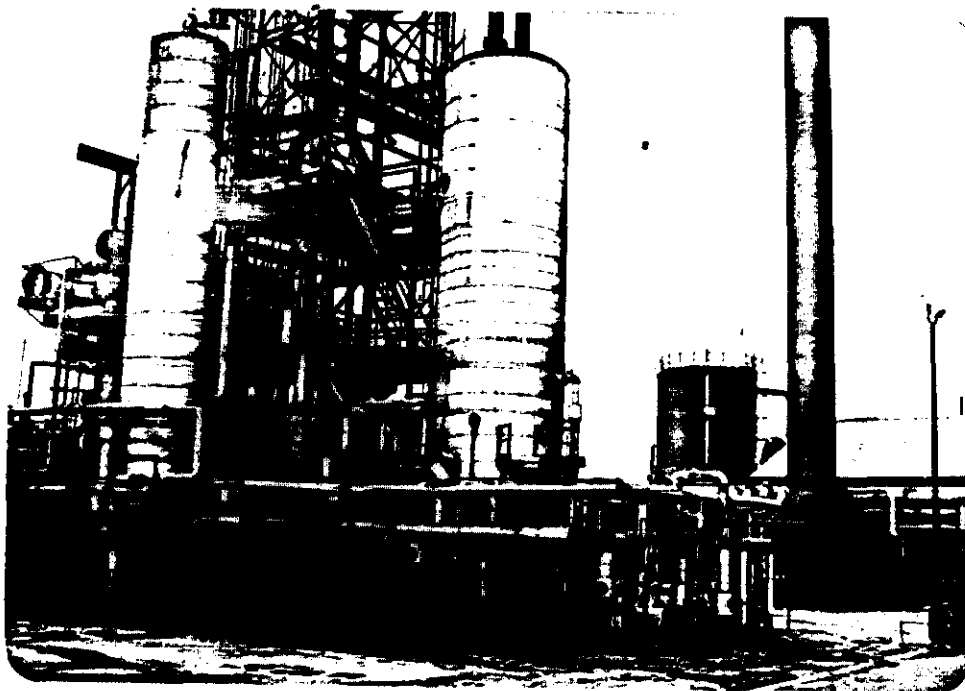
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Baltimore, Maryland 21226
(Baltimore City)

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(Red)

May 7, 1985 1415 to 1640 Hours



Main entrance gate and access
road at Chevron U.S.A./Baltimore
Terminal, 1955 Chesapeake Ave.

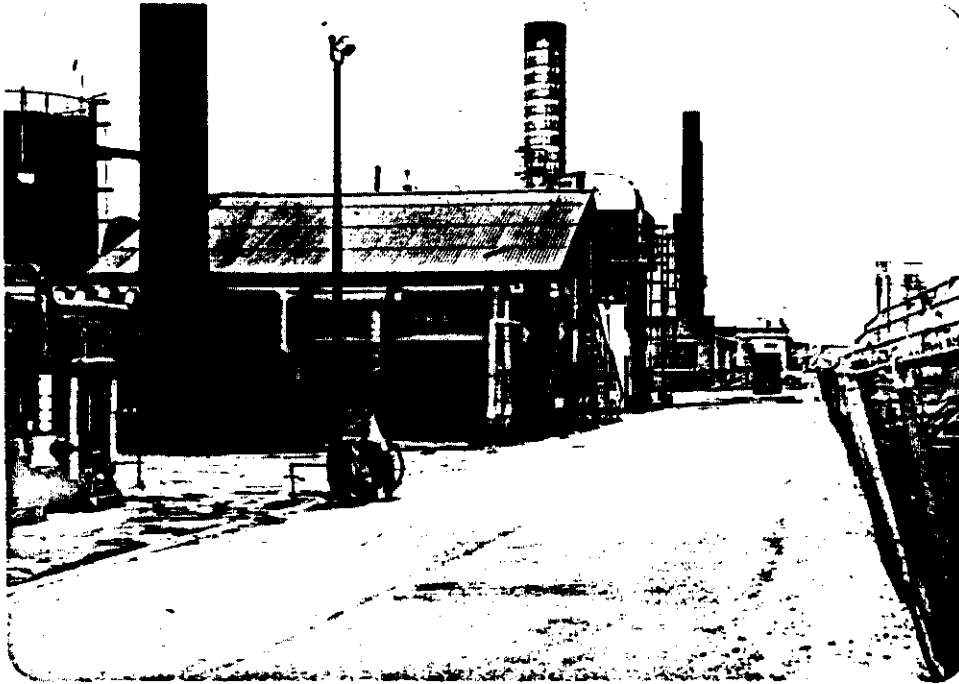


Main boiler area and Central
Control Room: Chevron U.S.A.

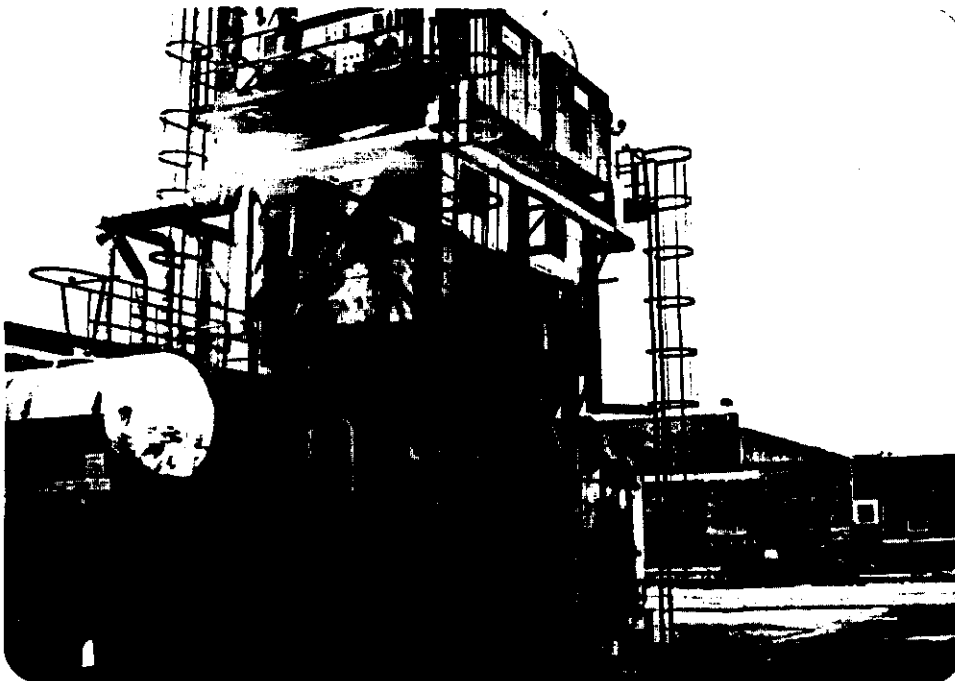
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Alternate view of main boiler
area and Central Control Room:
Chevron U.S.A./Baltimore Terminal.

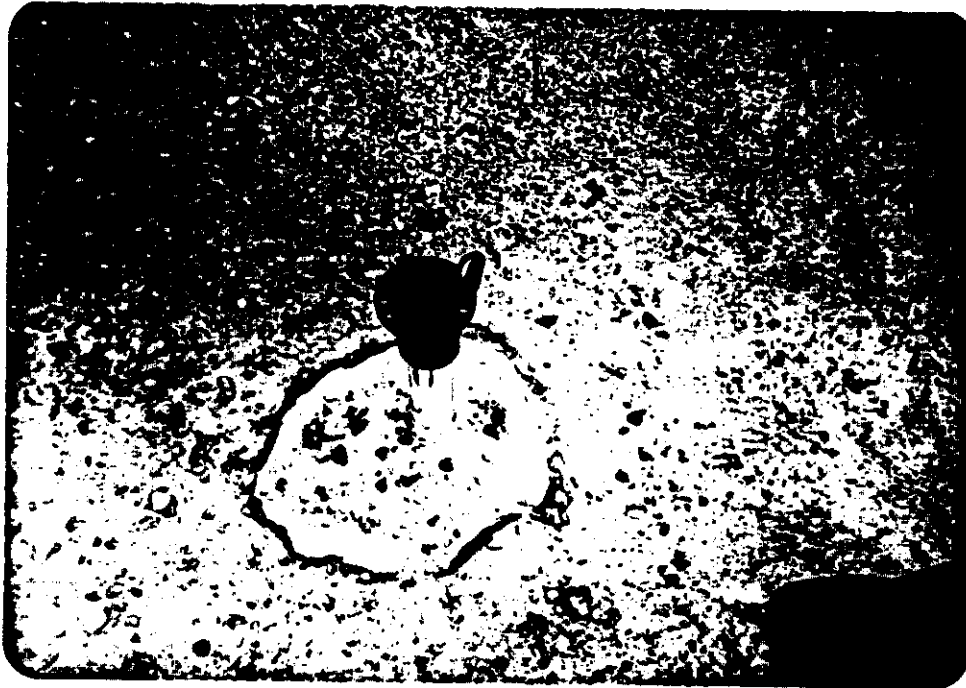


Close-up view of one of the two
main boilers on the Chevron
U.S.A./Baltimore Terminal site.

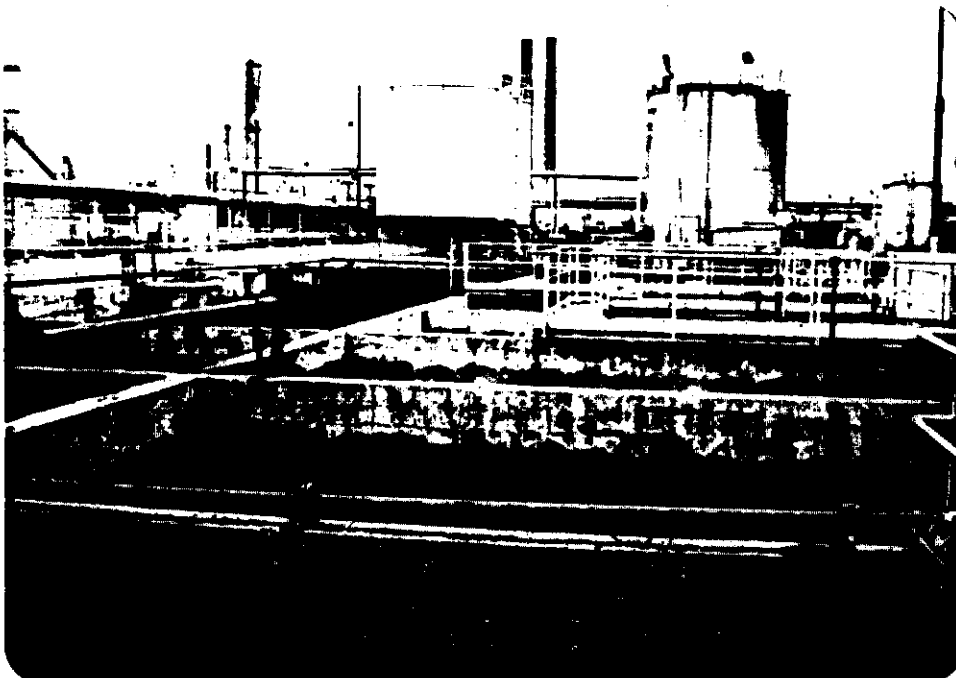
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Close-up of monitoring well on the Chevron U.S.A./Baltimore Terminal property located near the oil separator system.

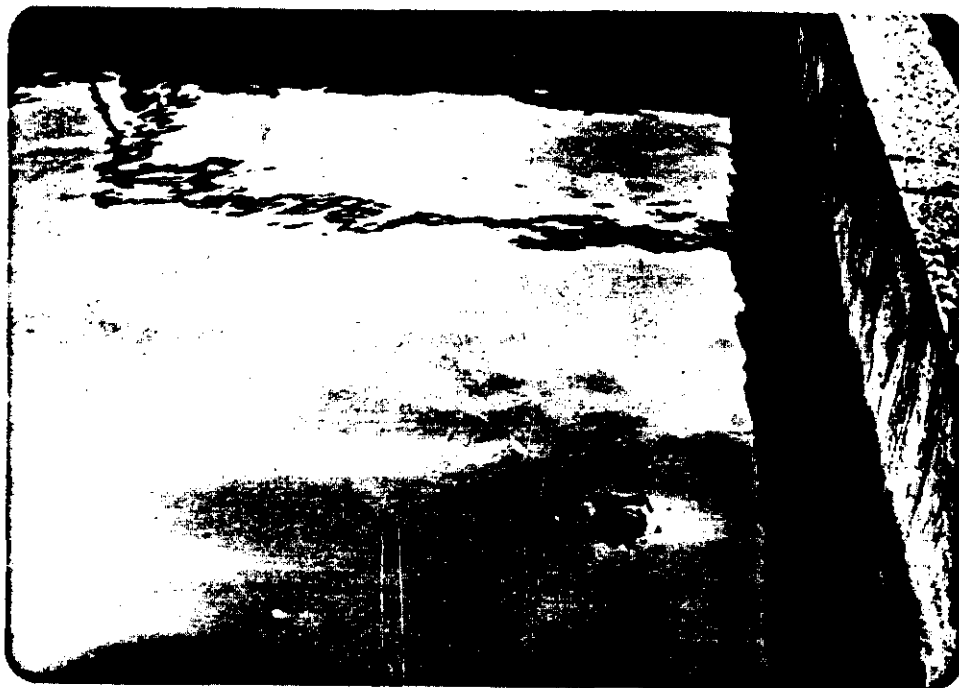


End view of oil separator system on Chevron U.S.A./Baltimore Terminal property.

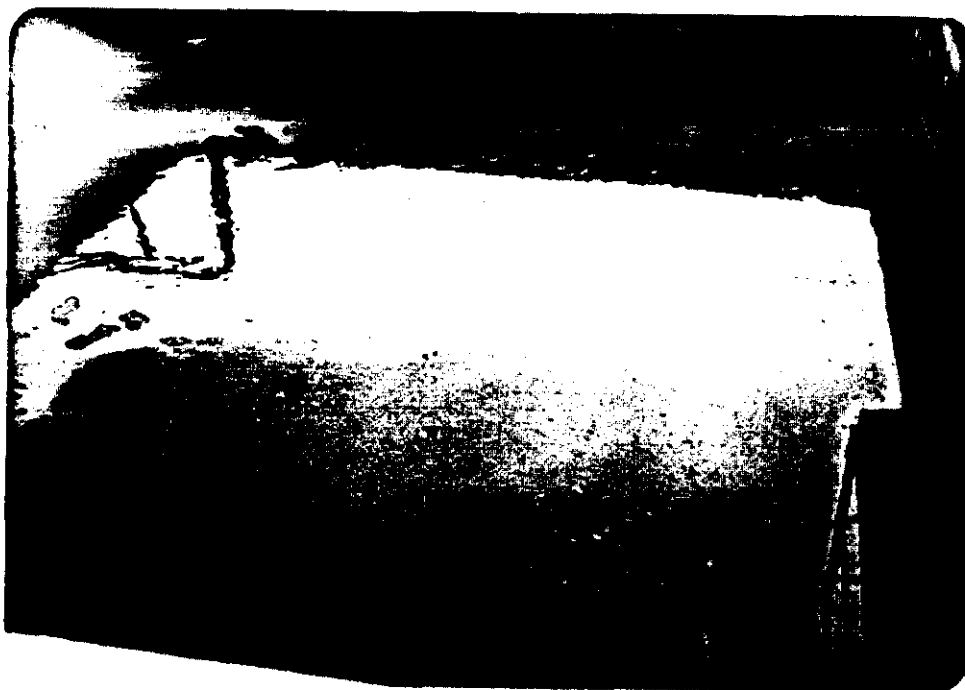
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Close-up of oils separator tank
on Chevron U.S.A./Baltimore
Terminal Property.



Close-up of oil separator tank
on Chevron U.S.A./Baltimore
Terminal property.

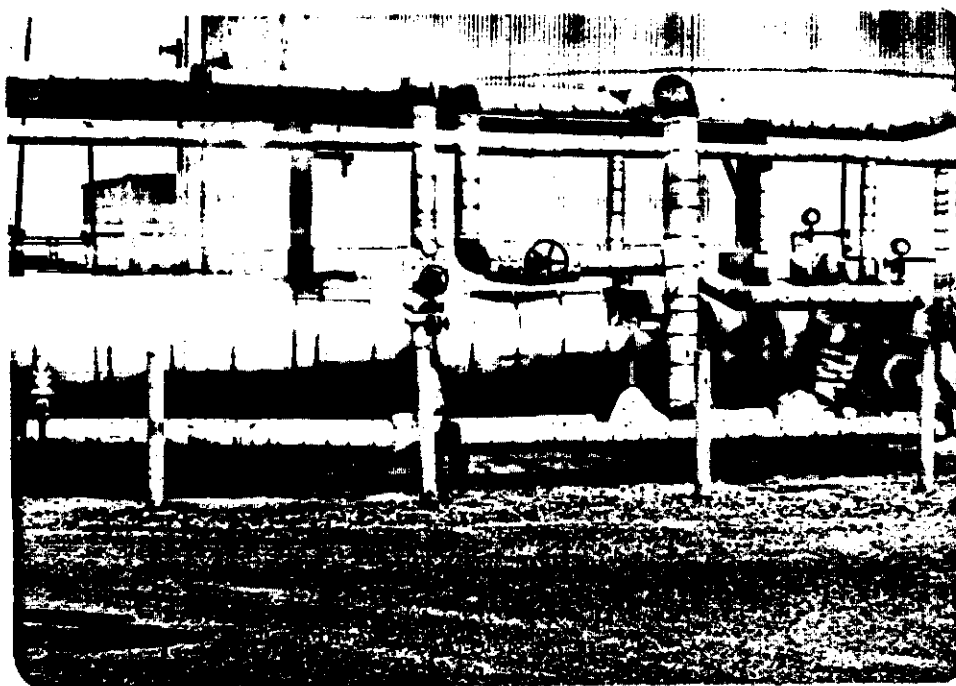
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End view of oil separator system
on Chevron U.S.A./Baltimore
Terminal property.



Heat exchanger unit located
adjacent to oil separator area:
Chevron U.S.A./Baltimore Terminal

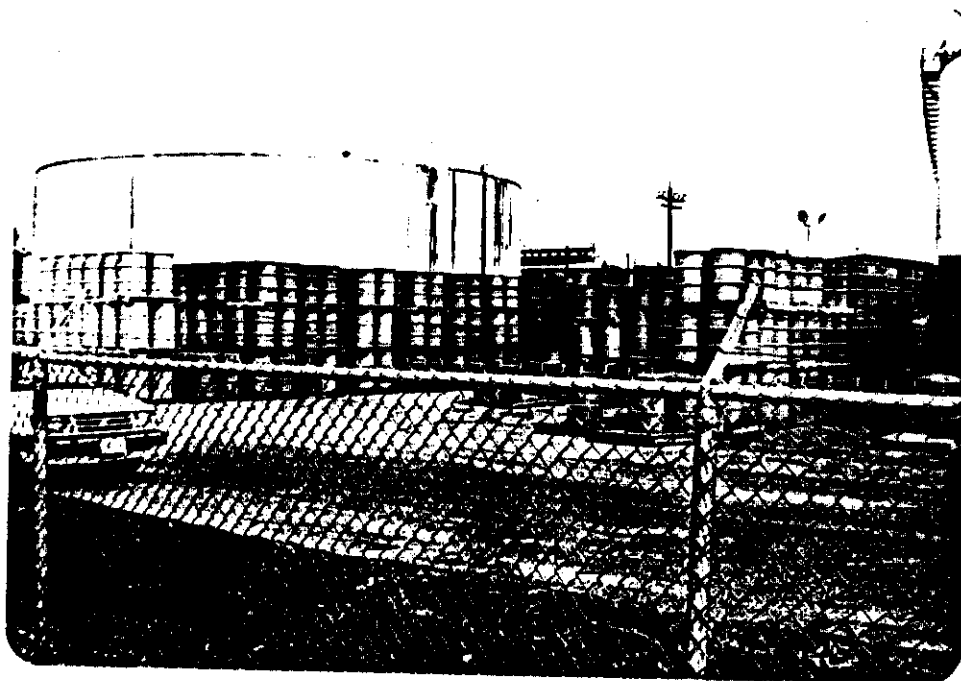
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Railroad system which runs from the north to the south ends of Chevron U.S.A./Baltimore Terminal property splitting the property into two halves.

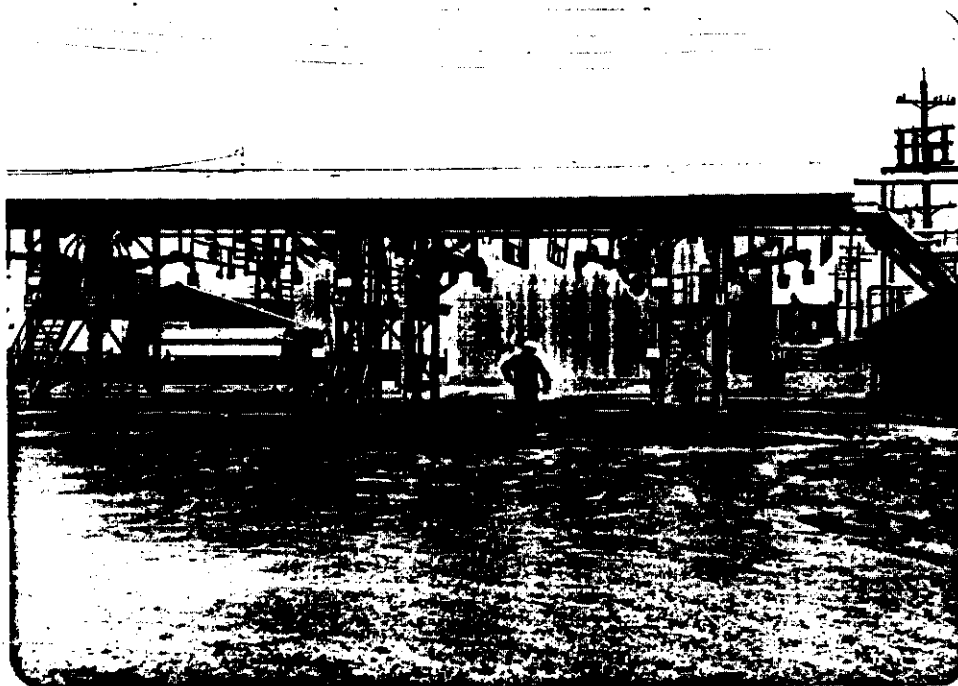


Drum storage area in the storage yard containing raw materials and production materials only.

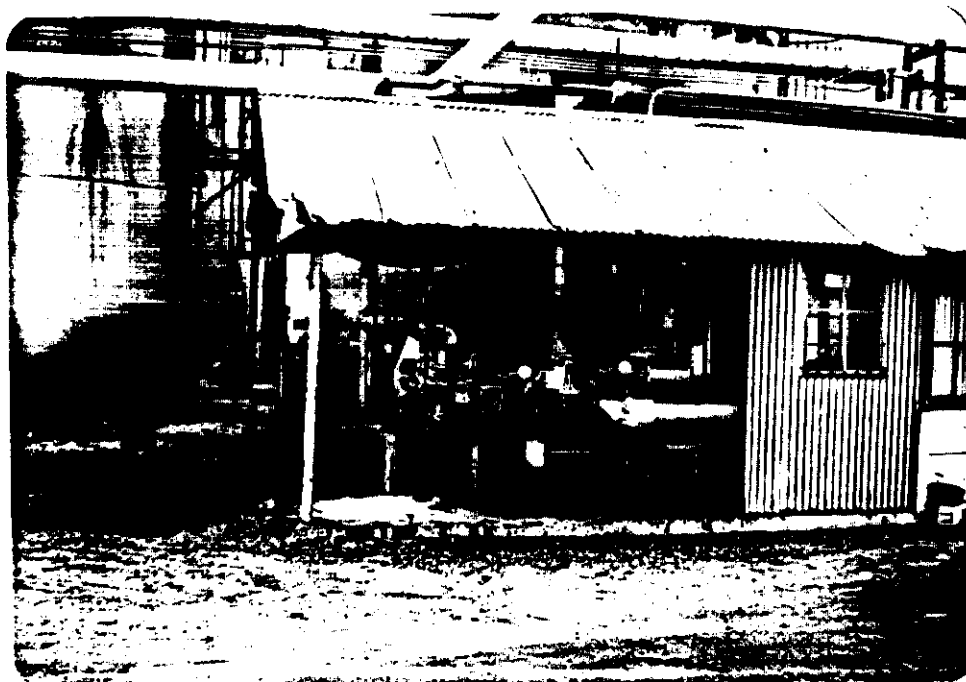
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Truck loading area located
near Shop area and Engineering
Building: Chevron U.S.A.

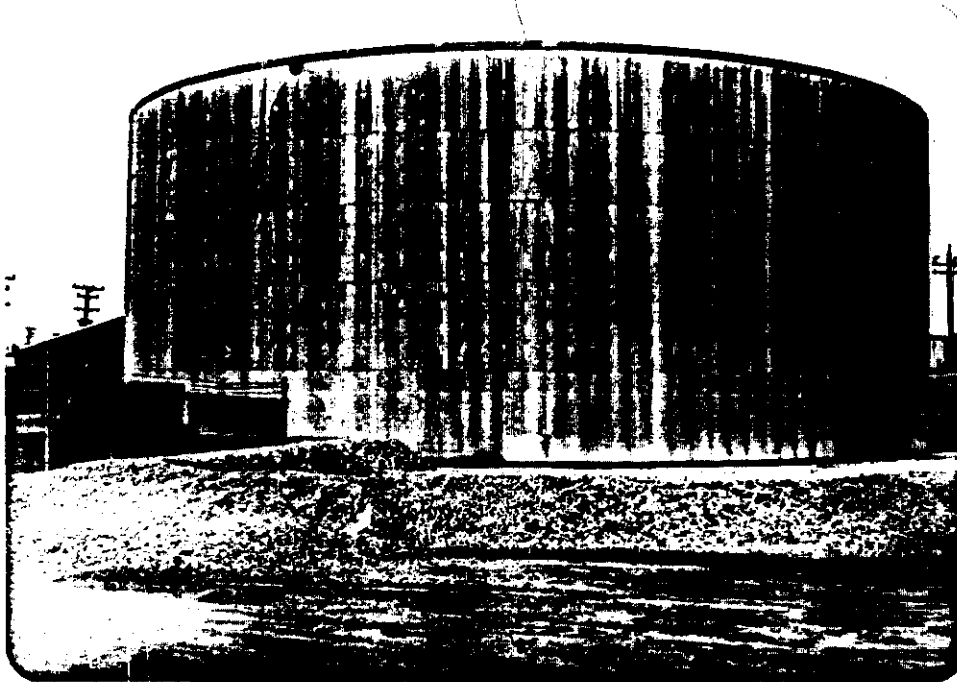


Shop building containing a small
generator: Drip pans pictured at
left of photograph.

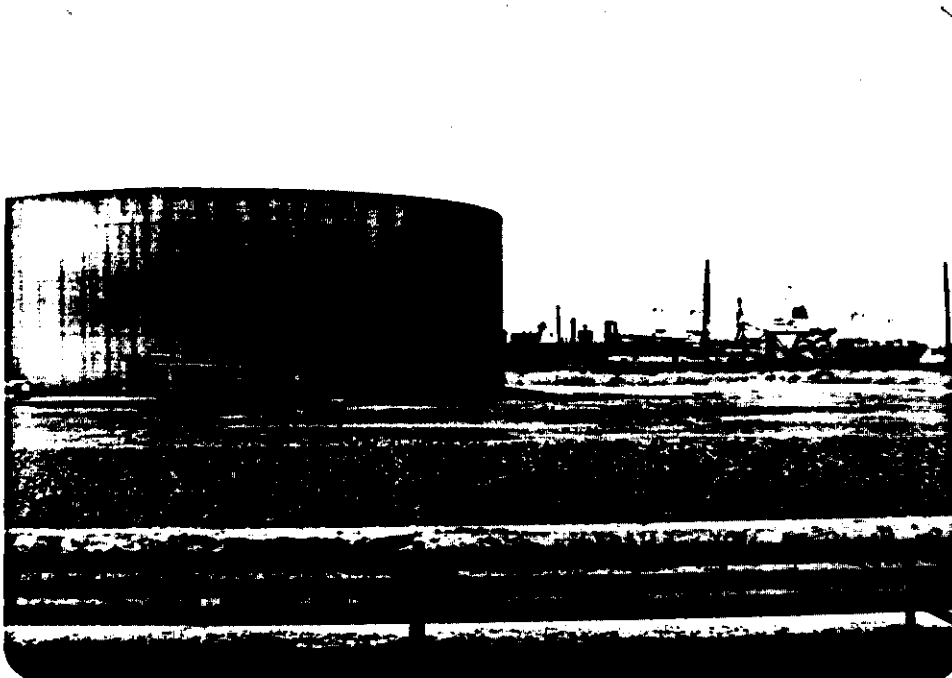
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Close-up view of asphalt storage tank near the drum storage yard.

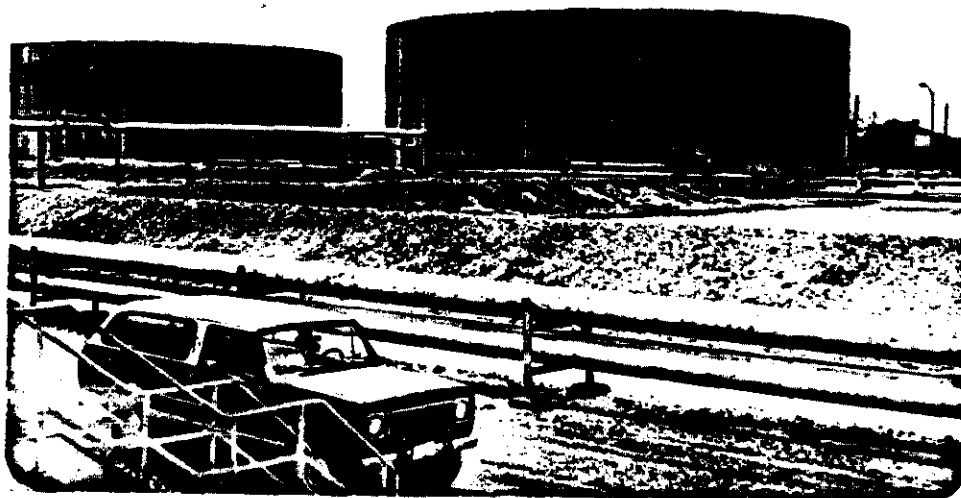


View of asphalt storage tank located near the shipping dock at the Chevron Asphalt Pier.

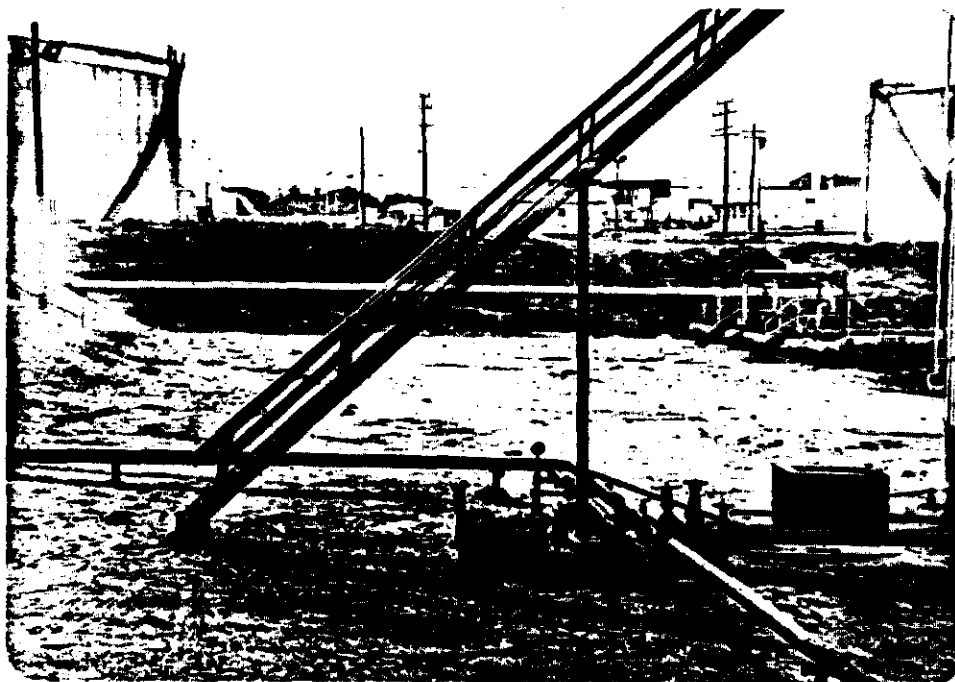
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View of asphalt storage tanks located inland from the Chevron Asphalt Pier as seen from the main Observation Pond area.



View of original site of leaded tank bottom which was formerly located on southwest side of storage tank #23 (See site plan).

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View of the original location of
lead tank bottom #2 which rest-
ed southwest of storage tank #24
on the Chevron U.S.A. property.



View of the main furnace area
(boilers) as seen from the paved
roadway near the Engineering and
Shop buildings: Chevron U.S.A.

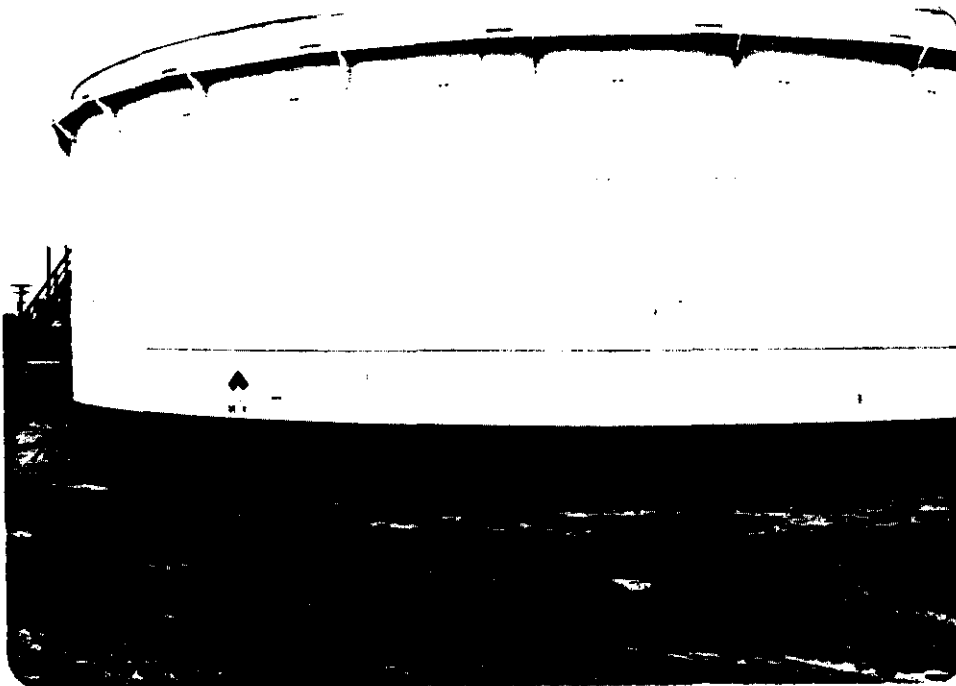
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View of storage tanks located around the paved road in the western half of the Chevron U.S.A. property.

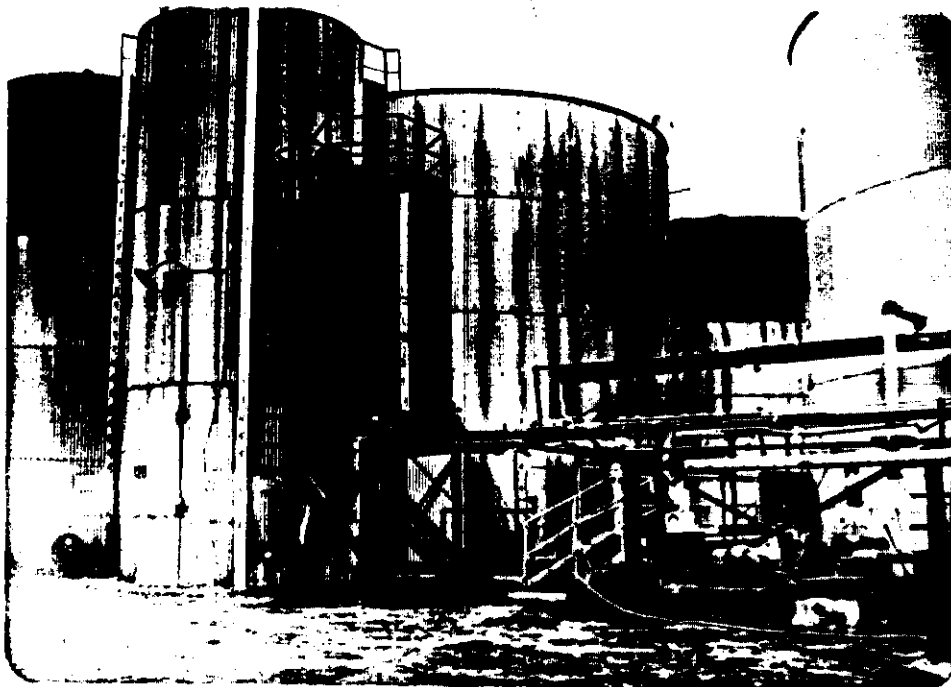


Close-up photograph of storage tank located just east of the paved road: Chevron U.S.A.

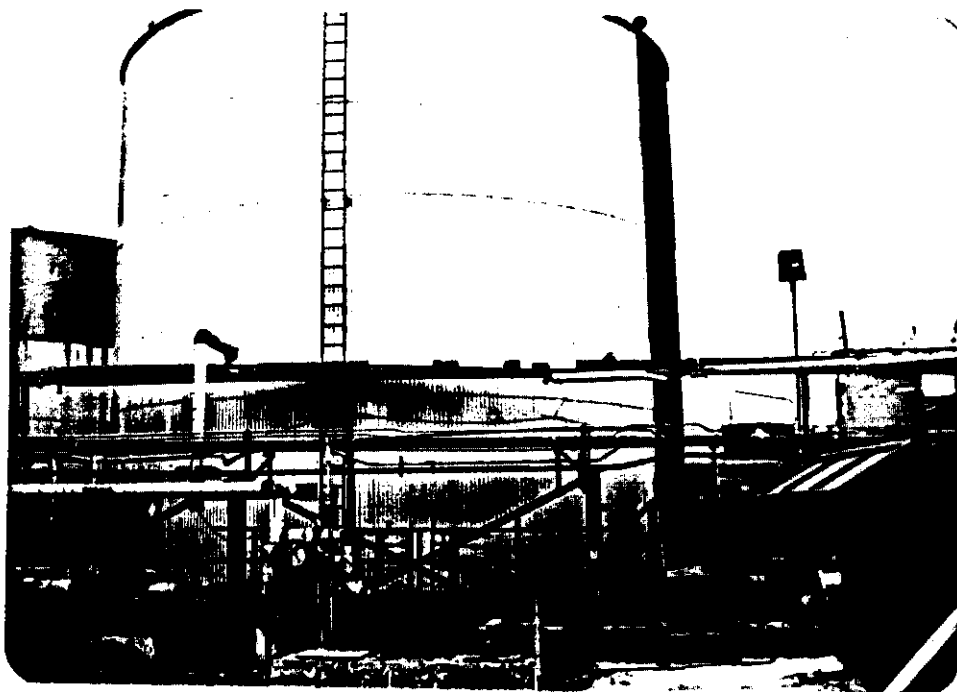
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View of storage tanks and unused equipment located on the south side of the emulsifying area.

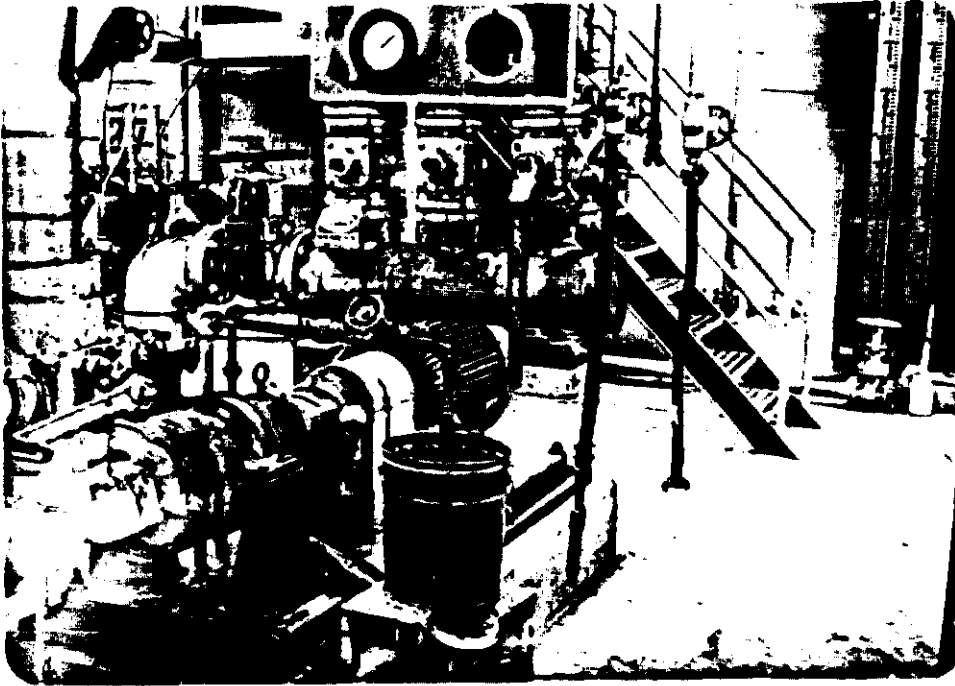


Close-up of storage tank and pipelines on the south side of the emulsifying area.

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Photograph of the Control Room
and generator inside the Main
Building in the Emulsifying
Area: Chevron U.S.A.

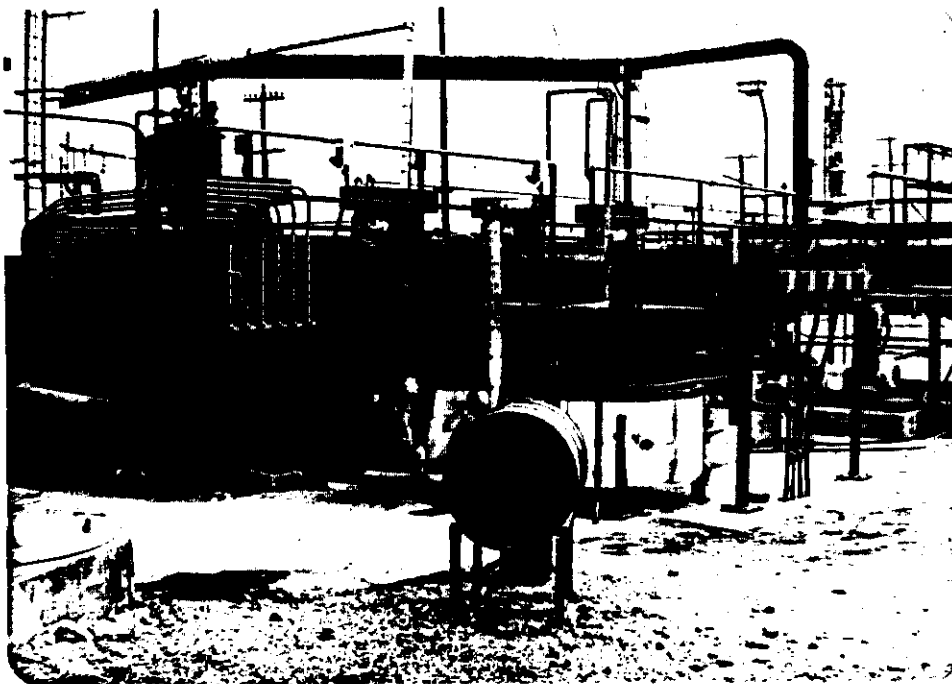


View of repaired pipes and
valves in the Control Room of
the Emulsifying Area where a
minor acid leak was cleaned up
the previous day. (See Summary)

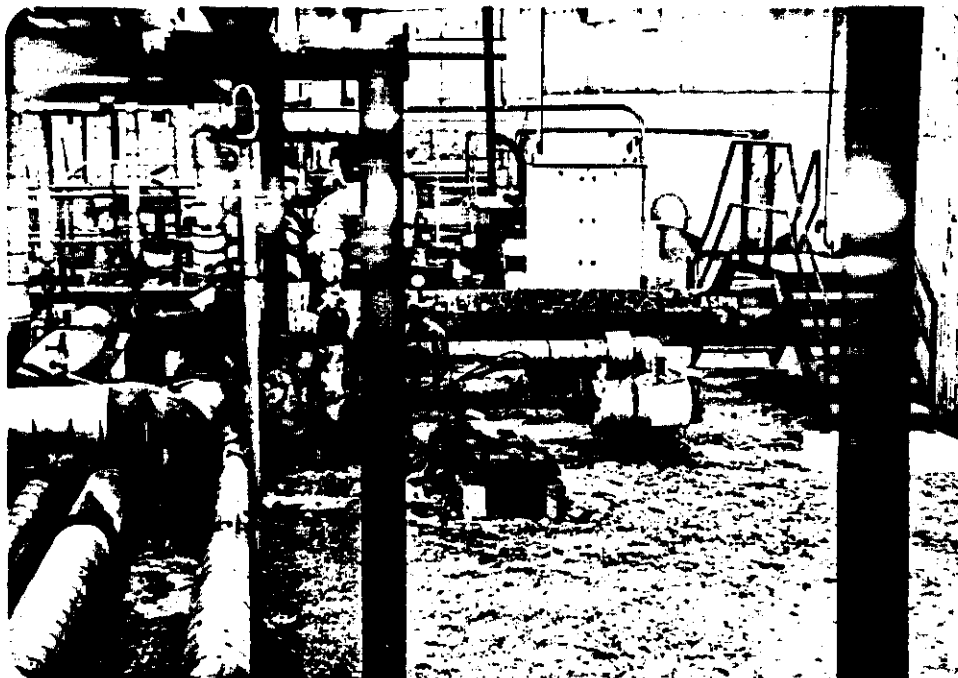
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View of power generators and related equipment located outside the Emulsifying Area Control Room.

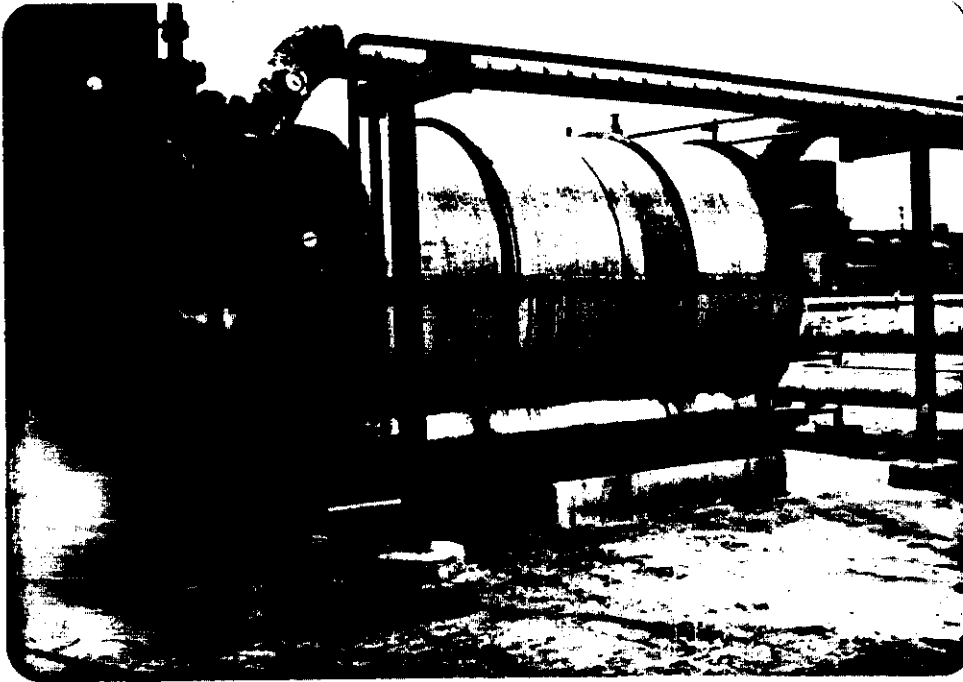


View of pipelines and storage tank located directly behind the heat exchanger unit shown on page 5.

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Dryer unit located in the hot oil area used in the hot batch heating process.

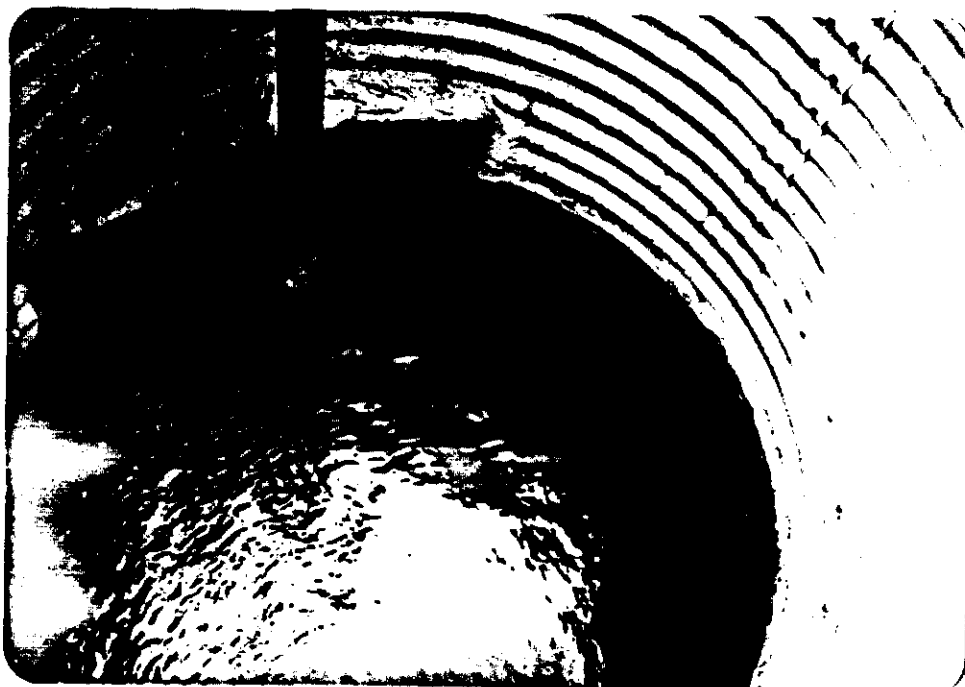


End view of the dryer unit and related associated structures: catwalk and drip pans pictured.

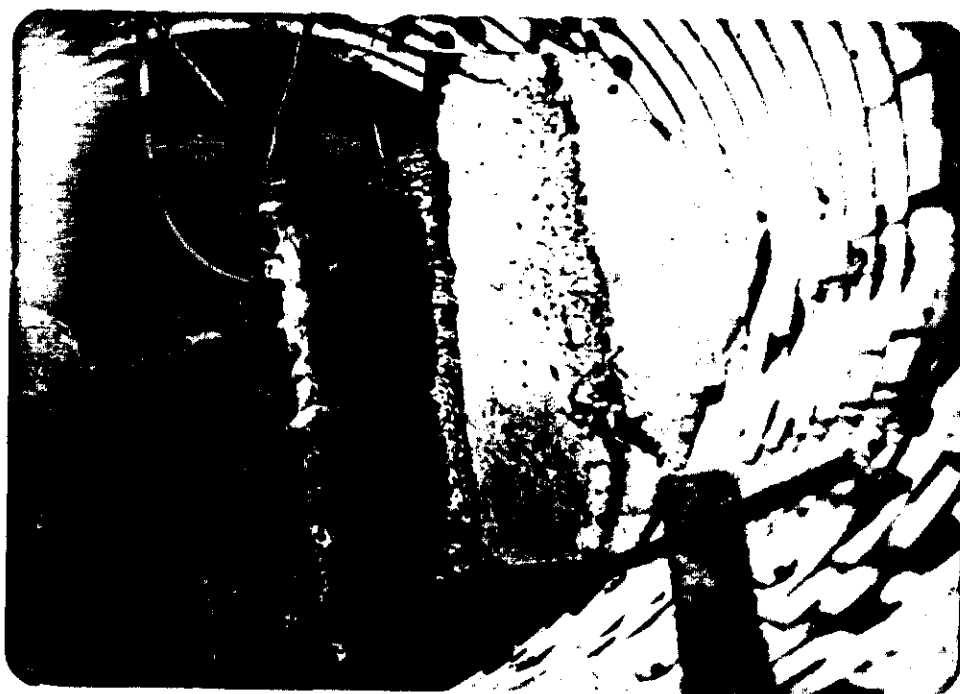
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Spillway and collection tank
located on the downstream side
of the Observation Pond.



Spillway and collection tank on
the downstream side of the Obser-
vation pond in the final stage
section of the treatment system.

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View of observation Pond in
eastern half of the Chevron
U.S.A. property near the Asphalt
Pier (See Site Diagram).

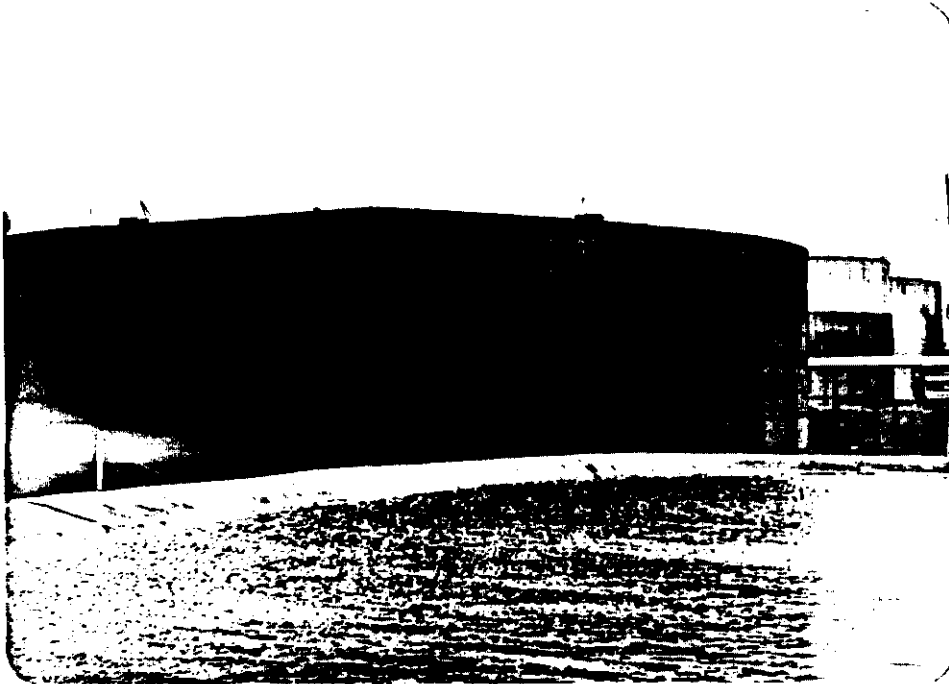


Close-up view of observed good
water clarity in the Observation
Pond: Chevron U.S.A.

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View of overflow storm water
storage tank located adjacent
to the Observation Pond.

DEPARTMENT OF HEALTH AND MENTAL HYGIENE
DIVISION OF RESIDENTIAL SANITATION
WELL APPLICATIONS PROCESSED SINCE 1969
REPORT NUMBER D130HA1

EAST GRID COORD.	NORTH GRID COORD.	PERMIT NUMBER	OWNER NAME	ADDRESS OF OWNER	CITY AND STATE OF OWNER	SUBDIVISION	SECT.					
(1000FT) (1000 FT)												
LOT	NEAREST TOWN	DIR. TO	DIST NEAR.	NAME OF NEAREST ROAD	SIDE OF ROAD	DIST. FROM ROAD	WATER USE CODE	CASING TOP DIAM. INCHES	WELL DEPTH REAL FEET	PUMPING RATE GPM. (TEST)	WATER LEVEL BEFORE TEST FT.	WATER LEVEL AFTER TEST FT.
925	511	BC 81 0013	WR GRACE CO	CHEMICAL RD	E	2000FT	BALTIMORE MD	21226	CURTIS BAY			*
* BALTIMORE		SE	0 MI	CHEMICAL RD			T					*
915	513	BC 73 0030	DNR/WRA	TAWES OFFICE BLDG			ANNAPOLIS MD	21401	FAIRFIELD			*
* IN BALTIMORE CITY		SW	0 MI	CHESAPEAKE AVE	N	950 FT	T					
915	505	BC 73 0013	BC DEPT OF PUB WORKS	300 MUNICIPAL BLDG	W	400 FT	BALTIMORE MD	21202	CURTIS BAY			*
* CURTIS BAY		*	0 MI	PENNINGTON AVE			T					
918	508	BC 81 0118	FMC CORPORATION	1701 E PATAPSCO AVE	S	1000FT	BALTIMORE	MD21203	FMC PLANT			*
* BALTIMORE		*	0 MI	PATAPSCO AVE			T	1	12	1	12	12
919	508	BC 81 0125	FMC CORPORATION	1701 EPATAPSCO AVE	S	1000FT	BALTIMORE	MD21203	FMC PLANT			*
* BALTIMORE		*	0 MI	PATAPSCO AVE			T	1	50	1	3	4